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REMARKS Re: CLAIMS

Applicant responds to the Detailed Action, as follows:

Item 1: In reference to the claims herein, and pursuant to the Interview Summary of 1 February 2005, the Notice of Allowance mailed 25 November 2003 of the parent application (#09/105,489) indicates, in Items 1.B and E, that claims 19-53 relate to an apparatus for enabling multiple modes of operation among a DC power source, a DC powered device, and a DC power module, which are classified in class 338, subclass 22R, or class 429, subclass 43 or 90, or class 327, subclass 512. Therefore, claims 19-53 are herein withdrawn and have a claim identifier as "withdrawn," by being directed to a non-elected species.

The Notice of Allowance further indicates, in Items 1.C and F, that claims 54-78 (herein resubmitted for Continued Examination and have a claim identifier as "previously presented") are for providing a temperature-sensing information to a DC powered device, which are classified in class 374, subclass 152. These claims are in the same class 374 as claims 1-18, and searching these claims will not cause any undue burden on the Examiner.

Previously presented claims 79-99 herein principally relate to subject matter presented in Figures 12-19D, and the related text in the Specification. Therefore, these claims are withdrawn and have a claim identifier as "withdrawn," by being directed to a non-elected species.

Claims 101-105, 107, 109, 111, and 117 are herein canceled in applicant's response to the subject Office Action.

Claims 100, 106, 108, 110, and 112-116 are of the subject Office Action, and are herein submitted, as follows:

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Item 2: Based on the Examiner's suggestions, applicant has amended claim 100 accordingly, except that:

In line 3 of the original claim, instead of changing "an insulator" to -- a first insulator -- applicant has changed it to -- a flexible insulator --. Because only a single insulator layer is recited, upon one surface of which is deposited a printed film of resistive ink, and the other surface of which is for a means of attaching the single-layered element to the power source, the reciting of a "first" layer appears unnecessary. Also, the claim as amended does not recite or suggest that a "second" layer is required or anticipated in order to render the claimed invention operational.

In line 5 of the original claim, instead of replacing "the" before "non-deposited" with -- another --, the claim now recites -- an other --. This variation from the suggested change is perhaps somewhat of a pedantic distinction, but applicant submits that the readability of the claim is enhanced by the term as herein amended.

Lines 9-10 of the original claim 100 have been deleted.

In response to Item 2(G) of the Office Action, applicant has extensively amended lines 12-14 of the original claim to overcome the lack of clarity as to how the power flowing "detects an altered resistive characteristic of said ink. As currently amended, a power signal flowing alters the resistive value of the thermally-resistive ink.

As Item 2 of the OA addresses claim 105, this claim is herein canceled. The elements of claim 105 which recite an insulator layer of a "printable material" that is "flexible" so as to "conform to one or more surfaces of a power source," are herein integrated into independent claim 100. By reciting these elements in claim 100, applicant has further limited this independent claim so as to patentably distinguish it from claims 1 and 2 of applicant's U.S. Patent No. 6152597, which do not recite these features. Dependent claim 3 of the subject patent teaches "a flexible resistive ink," but claim 100 herein recites "a

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flexible insulator layer." The reciting of these limitations in claim 100 is to overcome the Double Patenting rejection in Item 8 of the OA.

Dependent claim 103 is also herein canceled. This claim's ink film being applied to the insulator "by a printing process" is now incorporated into independent claim 100. This distinguishes amended claim 100 from the patented claims of Item 8 in the Office Action, in which claim 1 teaches "uniformly applying a thermally-resistive ink covering said entire open area of said major surface between said spaced accessible conductive element portions." Claim 1 teaches applying the conductors ("conductive elements") to a non-conductive layer first, then applying ink to the open area between these conductors.

Because of the limitation of a printing process in claim 100, the deposition of the ink must occur prior to the coupling of the first and second conductors. While this sequence in patented claim 1 is not incorrect, one skilled in the art would readily understand that printing a material upon which were already applied conductors could complicate passing the resulting material through a printing device, and that the proper sequence would be to run the layer material through a printing process first, and only afterward to attach the conductive elements.

This print-first sequence is supported in the Description: "FIGS. 5A and 5B show thermistor 100 expressed as a continuous coating of ink applied to a flexible, non-conductive medium 101. Conductors 225a, 225b, 225c, and 225d are then applied at appropriate locations to alter the resistive value of each segment" (Page 39, lines 6-8).

Item 11 of the Office Action indicates that such inclusion of elements from any intervening claims into all of the limitations of claim 100 will overcome the rejection under 35 U.S.C. § 112. Thus, by incorporating elements from claims 103 and 105 into applicant's amended claim 100, the subject claim is now in proper order for allowance.

Item 8: Currently amended dependent claims 106, 113, 114, as well as previously presented dependent claims 108, 110, 112, and 115 are to remain in the application

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because they recite elements which are patentably distinct from, and are not duplicative of, elements taught in the claims of applicant's U.S. Patent No. 6152597.

Claims 104, 107, and 109 are herein canceled because they recite elements that are unnecessarily duplicative of claims in applicant's U.S. Patent No. 6152597.

Item 2 of the Office Action addresses suggests changes to claims 101, 102, and 111. These claims are herein canceled because they are unnecessarily duplicative of elements taught in the claims of applicant's U.S. Patent No. 6152597.

Item 2 of the Office Action addresses claim 106, wherein applicant has amended line 2 of the claim as suggested by the Examiner by replacing "the exterior" with -- an exterior surface --.

Item 2 of the Office Action addresses claim 113, wherein applicant has amended line 1 as suggested by the Examiner by replacing "The connector element" with -- The apparatus of claim 108, wherein the multi-conductor connector --.

Item 2 of the Office Action addresses claim 114, wherein applicant has followed the Examiner's suggestion by changing "said enabling means" to -- said interconnecting means --.

Claims Rejections -- 35 USC § 112

Items 3 & 4: Applicant has herein amended claim 100 by changing "thermally-resistive ink" to -- thermally-reactive ink --. Support for this term is found throughout applicant's Specification, specifically Page 2, line 22; Page 21, line 19; and Page 22, line 1. The claim as amended overcomes the rejection in the Office Action, and now complies with the enablement requirement of 35 U.S.C. § 112.

Further, the rejection of claims herein dependent on claim 100 are now, by amending independent claim 100, are now allowable by virtue of being dependent on an allowable claim.

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The limitation recited in Claim 116 that "each segment separately monitors the specific surface area" is supported in the Description: "This configuration [in Figs. 5A and B], not limited to the three discrete but connected panels 109a, 109b, and 109c shown, can also be effective as a panel 213 attached to the external housing or enclosure of a multi-celled battery pack. As external panel 213, *each discrete segment* 109a, 109b, and 109c *monitor[s] a zone or area of a battery pack housing*, wherein each zone correlates to groups of cells inside the battery enclosure [applicant's emphasis]" (Page 50, lines 4-8). Thus, the subject claim has been described in the Specification in a way that satisfies the enablement requirement under 35 USC § 112, thereby overcoming the subject rejection in Item 4 of the Office Action.

Items 5 & 6: Claim 117 is herein canceled without prejudice as applicant's response to the Office Action's rejection under 35 U.S.C. § 112.

Double Patenting

Items 7 & 8: Claim 100, as has previously been argued, is now extensively amended to recite elements which patentably distinguish it from claims 1 and 2 of applicant's U.S. Patent No. 6152597. To briefly summarize, only amended claim 100 recites "a flexible insulator layer," that conforms to any contoured surface of a power source; having an ink "deposited by a printing process;" and conductors positioned to proscribe a "parallelogram;" and further reciting a "monitoring device." Also, the sequence of the apparatus is described to first print the ink on the insulator layer, then apply the conductors, which is just the opposite of the sequence taught in claim 1. These amendments overcome the nonstatutory double patenting rejection, and claim 100 is now presented in proper order for allowance.

Claim 116 also overcomes the nonstatutory double patenting rejection of Items 7 and 8 of the Office Action by being patentably distinct from claim 2 of applicant's cited patent. In re Mason, 114 USPQ 127, 44 CCPA 937 (1957) it has been held that the functional

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"whereby"/"thereby" statement does not define any structure and accordingly cannot serve to distinguish. As such, patented claim 2 teaches "...thereby partitioning said inked area to define an additional independent temperature-sensing segment coupled to one of said existing conductive elements, at least one of said conductive elements also being electrically coupled to an adjacent functional temperature-sensing segment of said ink area."

Claim 116, by comparison, recites the structure in the body of the claim as an "area of ink being partitioned into segments by the applications of a plurality of conductors, each electrically attached along part of its length to said ink area so as to be parallel to an adjacent conductor, so as to parse out geometric segments of said ink area as independent positive temperature coefficient thermistors." Thus, claim 116 is patentably distinct by properly reciting a structural element or feature that is not technically defined as a valid limitation in patented claim 2. Therefore, claim 116 overcomes the double patenting rejection.

Claim Rejections – 35 USC § 103

Items 9 & 10: Claim 117 is herein canceled without prejudice as applicant's response to the Office Action's rejection under 35 USC § 103.

All references to "capable of" have been eliminated by amendment of the impacted claims herein.

Allowable Subject Matter

Item 11: As previously argued, by amending independent claim 100 and dependent claims thereon 106, 113, and 114, applicant has overcome the rejections under 35 USC § 112. These claims, as well as previously presented dependent claims 108, 110, 112, and 115 are now in proper order for allowance.

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Response to Arguments

Item 12: The rejection with respect to claims 100-117 is herein overcome by applicant amending independent claim 100 to now recite the specific geometric configuration of the ink film area as a parallelogram, which the Office Action acknowledges as a unique element that is different from the teachings of both Freil and Cataldi. Both prior arts teach a geometrically sinusoidal "serpentine" configuration of their resistive elements.

The dependent claims 106, 108, 110, and 112-115 currently in this application are allowable at least for being dependent upon the now allowable independent claim 100.

Claim 116 overcomes the rejection based on the prior art of Freil and Cataldi by reciting that "each segment of the ink area defines an independent thermistor," which the Office Action acknowledges as a feature or element not taught by either prior art.

Since claim 116 has successfully overcome all of the objections and rejections alleged in Items 3-4, 7-8, and 12 of the Office Action, applicant submits that this claim is in a proper order for allowance.

Claim 117 is herein canceled without prejudice as applicant's response to the Office Action's rejection of applicant's previous reasoned arguments.

Item 13: The references to prior art cited are neither more nor less pertinent than the prior art of record in this application.

The claims herein submitted contain no new matter, and fall completely within the scope of the material set out in the originally filed documents.

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GENERAL REMARKS

This Request for Continued Examination is filed within the statutory three-month period proscribed in the Office Action mailed 3 November 2004. No fees for extensions of time are required

The claims submitted herein contain 30 (thirty) claims identified as "previously presented," of which 2 (two) are independent claims, and 28 (twenty-eight) are dependent claims. Further, 4 (four) claims identified as "currently amended" are also herein contained, of which 1 (one) is an independent claim, and 3 (three) are dependent claims. No fees for excess claims are required.

A filing fee of \$395 is enclosed, as required for a Request for Continued Examination under 37 CFR 1.17(e).

Please acknowledge receipt hereof by stamping and returning the enclosed return postcard.

Enclosed:

Transmittal Form PTO/SB/21
Request for Continued Examination Transmittal Form PTO/SB/30
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Applicant is available by phone at (818) 340-7268, or by fax at (818) 883-5706.

Respectfully submitted,



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3 FEBRUARY 2005
(Date of Deposit)

PATRICK H. POTEGA
(Name of Applicant)


(Signature)

3 FEBRUARY 2005
(Date)